

REMARKS

Upon entry of this amendment, claims 6-9 and 11-29 are pending. Claims 16-29 have been added by this amendment. Claim 10 has been canceled without prejudice and Applicants reserve their right to prosecute subject matter of the canceled claim in subsequent applications.

Claims 6 and 7 have been amended to recite a plant expressing a cellulase. Support for this amendment is in the specification on page 6, lines 4-5.

Claim 7 has been amended to recite the plant of claim 6 comprising a heterologous DNA sequence coding for a cellulase stably integrated into its nuclear or plastid DNA and under control of a promoter active in plants. Support for this amendment is in the specification on page

Claim 8 has been amended to be dependent upon new claim 16 directed to inducible promoters. Support for this amendment is in the specification on page 7, lines 5-6 and original claims 7 and 8.

New claim 16 has been added to recite the plant of claim 7 wherein the promoter is an inducible promoter and is supported in the specification on page 10, lines 2-4.

New claim 17 has been added to recite the plant of claim 7 wherein the promoter is a constitutive promoter and is supported in the specification on page 6, line 10.

New claim 18 has been added to recite the plant of claim 6, wherein the cellulase is an endocellulase (β -1,4-endoglucanase) and is supported in the specification on page 6, line 7.

New claims 19 and 20 have been added to recite the plant of claim 7 or 19 wherein the heterologous DNA sequence further comprises a targeting sequence or vacuole-targeting sequence, respectively, and are supported in the specification on page 6, lines 25-30.

New claim 21 has been added to recite the plant of claim 6 wherein the cellulase is thermostable and is supported in the specification on page 4, line 6.

New claim 22 has been added to recite a seed obtained from the plant of claim 6 and new claim 23 has been added to recite a seed obtained from the plant of claim 7 wherein said seed comprises the heterologous DNA sequence. These claims are supported in the specification on page 9, line 16.

New claim 24 has been added to recite a method of producing ethanol 24 comprising the steps of:

- a) harvesting the plants of claim 6;
- b) crushing, grinding or chopping the plants harvested in step a; and
- c) fermenting the plants from step b.

New claim 25 has been added to recite a method of producing ethanol comprising the steps of:

- a) chemically inducing the plants of claim 8;
- b) harvesting the plants of step a;
- c) crushing, grinding or chopping the plants of step b to release the cellulases; and
- d) fermenting the plants of step c. Support for claims 24 and 25 are in the specification

on page 13, line 19- page 14, line 2; and page 7, lines 14-15.

New claim 26 has been added to recite a method for enhancing the digestibility of animal feed comprising the step of adding the cellulase expressing plant of claim 6 to a feed mix. Support is in the specification on page 7, lines 16-17.

New claim 27 has been added to recite the plant of claim 6 further comprising at least one other cellobiohydrolase, cellobiose or other enzyme involved in the breaking down of cellulose and hemicellulose into simple sugars as glucose and xylose. Support is in the specification on page 3, lines 17-25; page 6, lines 6-8; and page 10, lines 2-7.

New claims 28 and 29 has been added to recite a method for enhancing cellulose degradation comprising the steps of harvesting, processing and fermenting the plant material of claim 27 or combining the plant of claim 6 with plant material from another plant expressing at

least one other cellobiohydrolase, cellobiose or other enzyme involved in the breaking down of cellulose and hemicellulose. Support is in the specification on page 7, lines 18-22.\

Attached is a marked-up version of the claims showing the amendments.

No new matter has been added by these amendments.

RESTRICTION REQUIREMENT

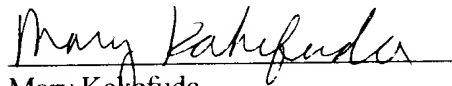
In the Office Action mailed Februar 4, 2002, the claims were restricted into four groups: group I, claims 6-9, and 11-15, to a plant expressing cellulases; group II, claims 6-9 and 11-15 to a plant expressing a cellobiohydrolase; group III, claims 6-9 and 11-15 to a plant expressing a cellobiose, and group IV to a package of seeds. Accordingly, Applicants hereby elect the claims of group I (claims 6-9 and 11-15 to a plant expressing cellulases) without traverse.

Applicants retain the right to petition from the restriction requirement under 37 C.F.R. § 1.144.

It is believed that no Extension of Time is required. The fee for additional claims is paid by the attached Credit Card Charge Form. However, if it is deemed that any other fees are necessary to maintain pendency of this application, then the Office is hereby authorized to charge Deposit Account No. 50-1744 (in the name of Syngenta Biotechnology, Inc.) for payment of such fees.

Respectfully submitted,

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Version of Marked-up Claims Showing Amendments

IN THE CLAIMS:

Please amend the claims to read as follows:

6. (Amended) A plant which expresses a cellulase [cellulose degrading enzyme].
7. (Amended) The plant of claim 6 comprising a heterologous DNA sequence coding for a cellulase [cellulose degrading enzyme] stably integrated into its nuclear or plastid DNA and under control of [an inducible] a promoter active in plants.
8. (Amended) The plant of claim [7] 16 wherein the inducible promoter is a wound-inducible or chemically-inducible promoter.

Please cancel claim 10 without prejudice.

Please add the following claims:

- 16. (New) The plant of claim 7 wherein the promoter is an inducible promoter.
17. (New) The plant of claim 7 wherein the promoter is a constitutive promoter.
18. (New) The plant of claim 6, wherein the cellulase is an endocellulase (β -1,4-endoglucanase or β -D-glucosidase).
19. (New) The plant of claim 7 wherein the heterologous DNA sequence further comprises a targeting sequence.
20. (New) The plant of claim 19 wherein the targeting sequence is a vacuole-targeting sequence.
21. (New) The plant of claim 6 wherein the cellulase is thermostable.
22. (New) A seed obtained from the plant of claim 6.

23. (New) A seed obtained from the plant of claim 7 wherein said seed comprises the heterologous DNA sequence.

24. (New) A method of producing ethanol comprising the steps of:

- a) harvesting the plants of claim 6;
- b) crushing, grinding or chopping the plants harvested in step a; and
- c) adding the plants from step b to a bioreactor.

25. (New) A method of producing ethanol comprising the steps of:

- a) chemically inducing the plants of claim 8;
- b) harvesting the plants of step a;
- c) crushing, grinding or chopping the plants of step ba to release the cellulases; and
- d) adding the plants of step c to a bioreactor.

26. (New) A method for enhancing the digestibility of animal feed comprising the step of adding the cellulase expressing plant of claim 6 to a feed mix.

27. (New) The plant of claim 6 further comprising at least one other cellobiohydrolase, cellobiose or other enzyme involved in the breaking down of cellulose and hemicellulose into simple sugars as glucose and xylose.

28. (New) A method for enhancing cellulose degradation comprising the steps of:

- a) harvesting the plants of claim 27;
- b) crushing, grinding or chopping the plants harvested in step a; and
- c) fermenting the plants from step b.

29. (New) A method for enhancing cellulose degradation comprising the steps of:

- a) harvesting the plants of claim 6;
- b) harvesting plant material expressing at least one other of cellobiohydrolase, cellobiose, or other enzyme involved in the breaking down of cellulose or hemicellulose;
- c) combining the plant material of step a and b;
- d) crushing, grinding or chopping the plants combined in step c; and
- e) fermenting the plants from step d. --